

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of

Applicant: Wenzel et al.

Filed: Herewith

For: METHOD AND SYSTEM FOR ION BEAM CONTAINMENT USING  
PHOTOELECTRONS IN AN ION BEAM GUIDE

INFORMATION DISCLOSURE STATEMENT

Mail Stop Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

1. Pursuant to 37 C.F.R. 1.97 and 1.98, and in compliance with 37 C.F.R. 1.56, the Office's attention is directed to the patents, pending applications, publications and other information listed on the attached PTO-1449. A copy of each listed document is enclosed except for: (a) pending applications or (b) those previously cited or submitted to the Office in the following application(s) upon which this application relies for an earlier filing date under 35 U.S.C. 120:

Serial No.: \_\_\_\_\_

Filing Date: \_\_\_\_\_

Regarding any document, publication or other information for which a date is not given on the attached PTO-1449, Applicant(s) believe(s) the same may qualify as "prior" art to this application and should be treated accordingly, although Applicant(s) reserve(s) the right to contest the prior art status of any document, publication or information, should issue arise.

2. Regarding each listed document that is not in the English language, an English-language translation accompanies this Statement as indicated on the attached PTO-1449 or a concise explanation of the relevance of the document is set forth in the following document(s):

- (a) ☐ Copy of each English language version of a search report indicating the degree of relevance found by the foreign office of each document being submitted from the search report.
- (b) ☐ Attachment entitled "Concise Explanation of Relevance of Non-English Language Documents".

3. Pursuant to 37 C.F.R. 1.97(b) this Statement is being filed (one must be checked):

- (a) ☒ Within 3 months of the filing date or date of entry into the National Stage.
- (b) ☐ Before the mailing date of a first Office Action on the merits. If this Statement is not filed before the mailing date of a first Office Action on the merits, the required certification is given below or, in the absence thereof, the Office is authorized to charge the required fee set forth in 37 C.F.R. 1.17(p) to Deposit Account No. 50-1733 for consideration of this Statement.
- (c) ☐ Before the mailing date of a first Office Action on the merits after a first or second submission under 37 C.F.R. 1.129(a).

(d) \_\_\_ After the period set forth in 37 C.F.R. 1.97(b) but before the mailing date of either a final action or a notice of allowance.

(1) \_\_\_ The required certification is given below, or

(2) \_\_\_ Enclosed is a check covering the fee set forth in 37 C.F.R. 1.17(p) for consideration of this Statement, or

(3) \_\_\_ Charge the fee set forth in 37 C.F.R. 1.17(p) to Deposit Account No. 50-1733

(e) \_\_\_ After the mailing date of either a final action or a notice of allowance, but before payment of the issue fee. Petition hereby is made for consideration of this Statement and the required certification is indicated below.

(1) \_\_\_ Enclosed is a check covering the fee set forth in 37 C.F.R. 1.17(i)(1), or

(2) \_\_\_ Charge the fee set forth in 37 C.F.R. 1.17(i)(1) to Deposit Account No. 50-1733.

4. Certification (if applicable)

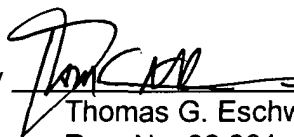
(a) \_\_\_ The undersigned hereby certifies that each item of information contained in this Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than 3 months prior to the filing of this Statement.

(b) \_\_\_ The undersigned hereby certifies that no item of information contained in this Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the undersigned's knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. 1.56(c) more than 3 months prior to the filing of this Statement.

5. The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to Deposit Account No. 50-1733.

Respectfully Submitted,

ESCHWEILER & ASSOCIATES, LLC

By   
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CERTIFICATION UNDER 37 CFR 1.10

I hereby certify that this paper, and the documents referred to as attached or enclosed, are being deposited with the United States Postal Service on the date set forth below in an envelope as "Express Mail Post Office to Addressee" service under 37 CFR 1.10, with the below indicated mailing label number, addressed to Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: July 31, 2003

  
Christine Gillroy

Mailing Label Number: EV317554850US

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PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

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<p>Substitute for Form 1449A/PTO</p> <p><b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b></p> <p>(use as many sheets as necessary)</p>				<b>Complete If Known</b>	
				Application Number	
				Filing Date	
				First Named Inventor	Wenzel et al.
				Group Art Unit	
				Examiner Name	
Sheet	1	of	2	Attorney Docket No.	02-IMP-076

U.S. PATENT DOCUMENTS						
Exam. Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Doc.	Date of Pub. of Cited Doc. (mm-dd-yyyy)	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
	AA	4,383,177		Keller et al.	05/10/1983	Entire Document
	AB	4,447,732		Leung et al.	05/08/1984	Entire Document
	AC	4,686,365		Meek et al.	08/11/1987	Entire Document
	AD	4,780,642		Jacquot	10/25/1988	Entire Document
	AE	5,206,516		Keller et al.	04/27/1993	Entire Document
	AF	5,350,926		White et al.	09/27/1994	Entire Document
	AG	5,433,788		Mochizuki et al.	07/18/1995	Entire Document
	AH	5,497,006		Sferlazzo et al.	03/05/1996	Entire Document
	AI	5,523,652		Sferlazzo et al.	06/04/1996	Entire Document
	AJ	5,554,857		Benveniste	09/10/1996	Entire Document
	AK	5,576,538		Sakai et al.	11/19/1996	Entire Document
	AL	5,661,308		Benveniste et al.	08/26/1997	Entire Document
	AM	5,703,372		Horsky et al.	12/30/1997	Entire Document
	AN	5,703,375		Chen et al.	12/30/1997	Entire Document
	AO	5,707,452		Dandi	01/13/1998	Entire Document
	AP	5,750,987		Ichimura et al.	05/12/1998	Entire Document
	AQ	5,760,405		King et al.	06/02/1998	Entire Document
	AR	5,811,823		Blake et al.	09/22/1998	Entire Document
	AS	5,825,038		Blake et al.	10/20/1998	Entire Document
	AT	5,834,786		White et al.	11/10/1998	Entire Document
	AU	5,925,886		Seki et al.	07/20/1999	Entire Document
	AV	5,975,014		Dandi	11/02/1999	Entire Document
	AW	6,016,036		Brailove	01/18/2000	Entire Document
	AX	6,060,718		Brailove et al.	05/09/2000	Entire Document
	AY	6,100,536		Ito et al.	08/08/2000	Entire Document
	AZ	6,130,436		Renau et al.	10/10/2000	Entire Document
	AAA	6,135,128		Graf et al.	10/24/2000	Entire Document
	AAB	6,207,963	B1	Benveniste	03/27/2001	Entire Document
	AAC	6,207,964	B1	McIntyre et al.	03/27/2001	Entire Document
	AAD	6,242,750	B1	Takahashi et al.	06/05/2001	Entire Document
	AAE	6,294,862	B1	Brailove et al.	09/25/2001	Entire Document
	AAF	6,271,529	B1	Farley et al.	08/07/2001	Entire Document
	AAG	6,297,594	B1	Sakai et al.	10/02/2001	Entire Document
	AAH	6,313,475	B1	Renau et al.	11/06/2001	Entire Document
	AAI	2002/0014587	A1	Benveniste et al.	02/07/2002	Entire Document
	AAJ	6,359,286	B1	Ito et al.	03/19/2002	Entire Document
	AAK	6,414,329	B1	Benveniste et al.	07/02/2002	Entire Document
	AAL	6,515,408	B1	England et al.	02/04/2003	Entire Document
	AAM	6,541,781	B1	Benveniste et al.	04/01/2003	Entire Document

Examiner Signature	Date Considered
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Unique citation designation number. <sup>2</sup>See attached Kinds of U.S. Patent Documents. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

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				Application Number	
				Filing Date	
				First Named Inventor	
				Group Art Unit	
				Examiner Name	
Sheet	2	of	2	Attorney Docket No.	02-IMP-076

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		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>2</sup> (if known)				
	BA	JP	7-340297		Hitachi, K.K.	12/27/1995	Entire Document	Yes
	BB	JP	406036735A		Tasyi tanasguta et al.	02/10/1994	Entire Document	Yes

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Exam. Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	CA	"Work Functions of the Elements [eV]", AFTER L. LEY and M. CARDONA, Photoemission in Solids, Springer 1979, 1 pg.,	
	CB	"Acceleration and Transport of Neutralized Ion Beams", Charged Particle Beams, A Wiley-Interscience Publication, STANLEY HUMPHRIES, JR., 1990, 7 pgs.	
	CC	"Space-Charge Neutralization and Studies of the Beam Plasma", BERNARD PETERS, A. C. HELMHOLZ and W. E. PARKINS, Definition and Description of the Beam-Plasma Region, Book Title Unknown, Date Unknown, 14 pgs.	
	CD	"A Noncontacting Scanning Photoelectron Emission Technique for Bonding Surface Cleanliness Inspection", DR. RAYMOND L. GAUSE, presented to the Fifth Annual NASA NDE Workshop, Cocoa Beach, Florida, Date unknown, 16 pages.	
	CE	"Lowering the Work Function of a Photoemissive Electrode", DIETER W. BLUM, The QTI Group, Applied Electrodynamics, September, 2000, 7 pgs.	
	CF		
	CG		
	CH		
	CI		
	CJ		

Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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